

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 4F-873cas142	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/FR2004/001782	International filing date (day/month/year) 08.07.2004	Priority date (day/month/year) 09.07.2003
International Patent Classification (IPC) or national classification and IPC H01R12/20		
Applicant JOHNSON CONTROLS AUTOMOTIVE ELECTRONICS		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))

_____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/001782

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-7 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-4 _____ received by this Authority on 10.05.2005 with letter
- nos.* _____ received by this Authority on of 29.04.2005
- ☒ the drawings:
- sheets 1/1 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/001782

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-4	YES
	Claims		NO
Inventive step (IS)	Claims	1-4	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-4	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following document:

D1: US-A-5 575 663

2. Claim 1

2.1 D1, which is considered to be the prior art closest to the subject matter of claim 1, describes (the references between parentheses apply to said document):

a connector (10) for a printed circuit board (24) including a housing (12), which comprises a first supporting portion (48) integral with the housing while being rigidly connected thereto for engaging a first surface (62) of the board; said connector comprises a second supporting portion (40, 42) integral with the housing for engaging a second surface (64) of the board (see figures 8 and 9); the second supporting portion is elastically connected to the housing so as to enable relative movement of the supporting portions in a support direction (see figures 7 and 8); at rest, the supporting portions (the first portion and the second portion) are separated by a distance less

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

than a theoretical minimum thickness of the board (column 3, lines 2 to 8); the first supporting portion comprises at least one supporting member that defines one bearing surface of the connector (see figures 7 and 8) and is borne by a rigid partition (32) projecting from the housing perpendicularly to the bearing surface of the connector on the board, whereas the second supporting portion (40, 42) includes at least one supporting member (42, 46) borne at the end of an arm (40) that is rigidly connected to a flexible blade projecting from the housing so that, when the connector is mounted on the board, the flexible blade extends over the first surface of the board and the arm passes through the board (see figures 7 and 8).

2.2 Consequently, the subject matter of claim 1 differs from this known connector in that:

the flexible blade extends near the rigid partition; the arm is connected to the flexible blade in a central zone of the latter; the flexible blade has an end portion that is connected to the adjacent rigid partition.

2.3 The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

2.4 The problem that the present invention is intended to solve can be considered to be that of providing a connector that reduces the dispersion of the force required to mount it on a printed circuit board.

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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2.5 The solution to this problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)) for the following reasons:

The prior art contains no indication that would prompt a person skilled in the art to find this solution.

3. Dependent claims 2 to 4

Claims 2 to 4 are dependent on claim 1 and thus also comply, as such, with the PCT requirements of novelty and inventive step.

4. Industrial applicability

Claim 1 relates to the printed circuit board connector. This subject matter is industrially applicable.